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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,759

09/07/2005

James Bruce Franklin

CU-4152 BWH

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EXAMINER

KIANNI, KAVEH C

ART UNIT

PAPER NUMBER

2883

MAIL DATE

DELIVERY MODE

04/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,759	Applicant(s) FRANKLIN ET AL.	
	Examiner Kianni C. Kaveh	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2007 and 14 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-43 and 46-85 is/are pending in the application.
- 4a) Of the above claim(s) 59-85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-43, 46-50 and 53-58 is/are rejected.
- 7) ☒ Claim(s) 51 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/26/06 and 6/23/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's election without traverse of claims 34-43, 46-58 in papers submitted on 9/20/07 and 1/14/08 is acknowledged. The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 34, 37-38, 43 and 50 and 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 34 recites the limitation 'the changes in profile' in the last parag. of the claim.

There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Claim 37 is ambiguous, since the limitation 'in use the average solid angle of the propagation light' is indefinite and lacks antecedent basis using repetitive 'the'.

Claim 38 is ambiguous, since the limitation 'light... in use the product of cross-sectional area and the average solid angle is substantially constant' is indefinite and confusing, i.e. what is solid angle?.

Claim 50 is ambiguous, since 'the first portion is arranged for face-to-face connection *with the or* each light collector sheet' is indefinite.

Claim 58 is indefinite since the intermediate portion is a light guide with having core to transport light and not just a cladding which makes the claim indefinite.

Allowable Subject Matter

Claims 51-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 51-52 allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein the first portion arranged for emission of fluorescent radiation in combination with the rest of the limitations of the base claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

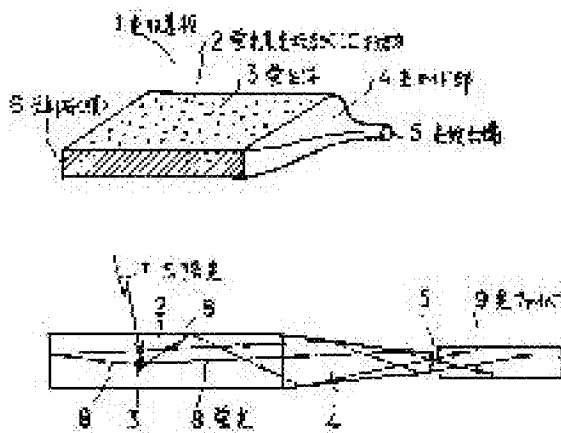
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of

each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 34-43, 46-50 and 53-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over combination of Tsuji et al. (JP 63-318503; supplied by the applicant as prior art) and Sultan et al. (US 5195162 A).

Tsuji teaches a light transfer component formed from a material that is transparent for light of a predetermined range of wavelengths, the light transfer component (see at least figures 1-2)



comprising:

a first portion being substantially flat (shown in at least fig. 1-2), , a second solid rounded portion 9,

an intermediate portion 4 disposed between the first portion 2 and the second portion 9, the *intermediate* portion being at least in part rounded (shown in at least fig. 1-2), wherein the light transfer component is arranged for guiding light within the material from the first portion through the intermediate portion to the second portion in a manner such that, in use, light, guided from the first portion to the second portion will experience a gradual transition in the cross-sectional and longitudinal profiles of the light transfer component (shown in at least fig. 1-2) and wherein the *changes* in profile *are* sufficiently gradual such that there are negligible bending losses of the light when the light guided through the transfer component (this limitation is functional/negative limitation is not given patentable weight); wherein in use the average solid angle of the propagating light is substantially constant throughout the light transfer component (shown in at least fig. 1-2); light guided from the first portion to the second portion will experience light guiding condition in which in use the product of cross-sectional area and the average solid angle is substantially constant (this functional limitation is inherent to the component); wherein refractive index is constant throughout the light transfer component (shown in at least fig. 1-2, wherein the matched refractive index of the component is obviously constant); having two substantially parallel surfaces (shown in at least fig. 1-2); wherein the first portion 2 comprises a rectangular sheet; light guided from the first portion to the second portion will experience light guiding condition in which the product of cross-sectional area and average solid angle will not change by more than 20% (this limitation—light ..experience...—is a functional limitation is not given patentable weight; nevertheless, it is inherent into the component);

being arranged for connection to an optical cable (shown in at least fig. 1-2); being arranged for face-to-face connection to the optical cable (shown in at least fig. 1-2); being arranged for face-to-face connection to a light converting device (shown in at least fig. 1-2); being arranged for direct connection to at least one light collector sheet (shown in at least fig. 1-2); Wherein the first portion is arranged for face-to-face connection with the or each light collector sheet (shown in at least fig. 1-2); being formed from a transparent material with a refractive index that approximates that of the or each collector sheet (shown in at least fig. 1-2); wherein the optical cable has a single core (shown in at least fig. 1-2); wherein the second rounded portion of the light transfer component is clad with a material of low refractive index (shown in at least fig. 1-2); wherein the *intermediate* portion of the light transfer component is clad with the material of low refractive index (shown in at least fig. 1-2),

However, Tsuji does not explicitly teach wherein the above intermediate portion is hollow, and light guided from the first portion to the second portion will not experience a reduction in cross-sectional area of the material through which the light is guided, wherein the cross-sectional area is substantially constant throughout the right transfer component, light directed from the first portion to the second portion will experience an increase in cross-sectional area of the material through which the light is guided, wherein the material is poly methyl methacrylate (PMMA); a bundle of optical fibres;

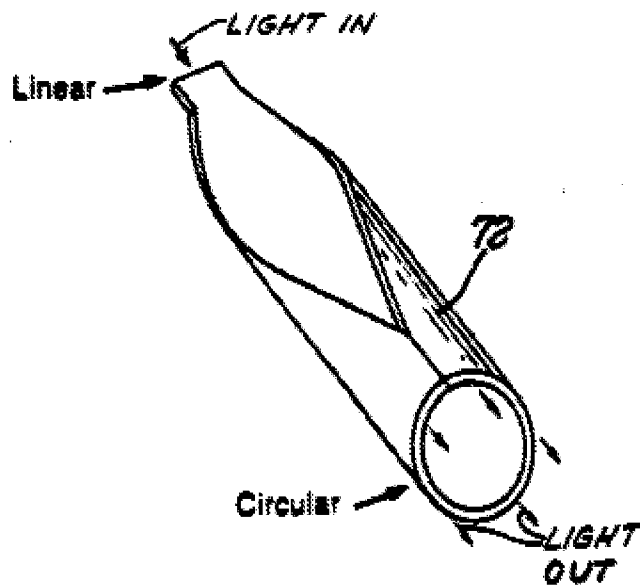


Fig. 12b

Figure 1 2 with 1st flat section and middle intermediate section; also the last section can be considered as a 2nd section.

These limitations are taught by Sultan (see at least fig. 12b, item 72 and see at least col. 3-8). Thus, Sultan provides long distance light transmission with low attenuation (see last parag. of the summary). Thus, it would have been obvious to a person of ordinary skill in the art when the invention was made to combine the closely compatible teachings of Tsui and that of Sultan in order to provide a light transmission system that includes the above limitations since such system would provide sunlight collection and transmission system (see abstract).

Citation of Relevant Prior Art

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

US 4991918 A

US 6272265 B1

US 4368384 A

US 4991918 A

US 4688884 A

US 4612144 A

US 20040136650 A1

US 5483081 A

US 20020070365 A1

US 4143941 A

US 5195162 A

US 6059438 A

US 5709453 A

US 5665962 A

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kianni C. Kaveh whose telephone number is 571-272-2417. The examiner can normally be reached on 9:30-19:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kianni C Kaveh/
Primary Examiner, Art Unit 2883

March 26, 2008
